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AMPUTATION

OF

CERVIX UTERI.

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AMPUTATION OF CERVIX UTERI.

History of the Operation.—Amputation of cervix uteri was first practiced for the removal of malignant growths, and perhaps was recommended by Ambroise Paré. The report that this operation was performed in 1652 by Tulpius, of Amsterdam, and in 1766 by La Peyronie, is not generally believed. Baudelocque claims that excision of the cervix was first recommended and performed in 1780 by Lauvariot; Lazzari ascribes it to Monteggia, and M. Tarral to Tulpius; but according to M. Velpeau the tumors they removed were polypi; nor does he believe that the operation was performed by Andry de Craix and La Peyronie, as M. Tarral represents. It was recommended in 1787 by Traisberg, and the operation may have been occasionally performed by persons who mistook the enlarged cervix for a polypus. In 1736 Daniel Turner, of London, reported the case of an insane woman who amputated the prolapsed cervix with a razor, recovery following.

The honor of amputating the cervix systematically is due to Osiander, of Göttingen, who first operated in 1801, and afterward twenty-two times. He was soon followed by Dupuytren, D'Outrepont, Textor, Herves de Chegoin, and Recamier, and in 1815 amputation of the cervix was a common practice in France, but it appears not to have been brought generally before the profession until the time of Lisfranc, who operated ninety-seven times with gratifying results. Huguier soon adopted the operation, and was the first to amputate the supravaginal cervix, and the first to amputate the cervix for prolapsus in 1848. The operation is now performed by nearly all gynecologists, the only difference of opinion being as to the cases in which the excision is indicated and the method of performing it.

Conditions in which the Operation is Indicated.—In malignant growths of the cervix, where the disease has not reached the vaginal vault, if excision be performed, it may never return,

and in any event the operation will stay its progress for a while. Unfortunately the premonitory symptoms are often so masked that we do not suspect the disease until the vagina is involved, and frequently the mobility of the uterus is interfered with. In these cases there is a variety of opinions as regards the propriety of excision, but if the mobility is only partially prevented, and the operation is followed by the use of cautery, we may succeed in curing the disease, or at least in prolonging life, by controlling pain, hemorrhages and ichorous discharges more effectually than by any other means. Where there is absolute immobility of the uterus, the cancer has generally extended to the bladder and broad ligaments, and the lymphatic vessels are involved, so that amputation would not be indicated.

In hypertrophic or hyperplastic elongation or enlargement of the cervix to such an extent as to cause chronic prolapsus or procidentia, or intractable endometritis, no treatment will give such good results as amputation. When the cervix is much enlarged, plastic operations within the vagina for procidentia, cystocele or rectocele will not be successful until it is excised. The old practice of attempting to reduce these enlargements by the use of strong caustics, such as potassa fossa, potassa cum calce, or the hot iron, has few advocates. I have never seen a large hypertrophic or hyperplastic indurated cervix approximately reduced to its normal size by this treatment, and I doubt if it is possible. The theory that the caustic produces healthy nutrition of the part and causes the absorption of the superabundant product, has no facts to sustain it. By amputation most of the enlargement can, if desired, be removed, and the healthy involution, the result of the operation, rapidly reduces the cervix and uterus to their normal dimensions. In one of my amputations the depth of the uterine cavity decreased one inch and a half in three weeks, and in another one inch and three quarters in two and a half weeks.

The enlargement may affect the entire cervix or be confined to the infra-vaginal or supra-vaginal part. Professor Karl Schroeder divides the cervix into three parts, in accordance with the different insertions of the anterior and posterior vaginal walls, but such division confuses the student and has no

practical advantages. Amputation may be performed in either case, but the operation for the removal of the supra-vaginal part is more difficult, and is more frequently followed by profuse hemorrhage.

Amputation is sometimes the only means of relieving sterility, for when the cervix projects into the vagina half an inch the woman will probably be sterile, and if the projection is an inch or more, almost certainly so. In the truncated cervix conception will occur more readily than in the conoid form, and therefore amputation is more frequently indicated in the latter than in the former.

In case the cervix is over half an inch long, with a laceration extending not nearer to the vaginal attachments than one-third of an inch, amputation is the best and simplest treatment.

Results of the Operation.—The success of the operation in the cases before mentioned is often decided. When amputated for cancer before it has reached the vagina, the disease frequently never returns, and where the vagina is involved this is generally the best means of prolonging life; if the cut surface is thoroughly cauterized after amputation, the disease may never return, and if it does, the new growth usually makes slower progress. According to Samuel Cooper, Lisfranc, previous to 1828, had amputated the cervix thirty-six times for what he supposed to be cancer, and up to that time thirty were well, three in progress of recovery, and three dead; but his diagnosis was possibly sometimes incorrect. However, many cases of genuine cancer have entirely recovered after the operation. Cancer is supposed to be primary in the cervix more frequently than in any other part of the body, and is therefore more amenable to surgical treatment, and when removed is less likely to return. Simpson, Watson and others report cases where women have borne children after the operation. One had five children and another had twins. Osiander operated eight times, and M. Chassaignac six times successfully, and Dupuytren eight times, with one failure.

When the hypertrophic or hyperplastic cervix is excised, the result generally realizes our hopes. There is no treatment that will cause healthy involution so rapidly and so effectually, and

the uterus assumes a normal condition, and returns to its natural size.

Amputation of the cervix frequently cures prolapsus and procidentia, and if the cervix is much enlarged we can not permanently relieve our patient without the operation. Women will conceive readily after excision of the cervix for hypertrophy or hyperplasia; one of my patients became pregnant at the first opportunity after the operation.

Dangers of the Operation.—The operation in the hands of an inexperienced or careless person is certainly dangerous, but when carefully performed seldom causes death. Lisfranc operated successfully ninety-seven times, Huguier thirteen times, and Osiander eight times. Sims operated over fifty times, with but one death, and this patient probably would have recovered had it not been for the development of erysipelas in the wards of the hospital. I have operated six times successfully. One patient, however, died on the seventh day of accidental opium poisoning. The operation may result fatally from immediate or subsequent dangers.

Hemorrhage.—The cervix, especially the supra-vaginal part, is abundantly supplied with blood vessels, and its amputation may prove fatal from either primary or secondary hemorrhage. This accident is considered so fatal by many eminent gynecologists that they will not use the knife or scissors, but always operate with the écraseur or galvano-caustic wire. I have met with no profuse hemorrhage in my cases, nor do I think it ought to prove fatal when the patient is where she can promptly summon medical assistance; still it is our duty to avoid this complication.

Collapse.—The shock to the system is sometimes out of all proportion to the seeming gravity of the operation, and there have been a few instances where the patient has died of collapse. Lisfranc reported two cases of death from collapse and Simpson one. Of Simpson's patients, another came near dying. The collapse may begin immediately or soon after the operation.

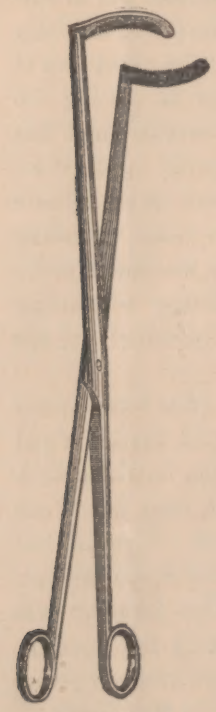
Surgical Fever.—Peritonitis or cellulitis may follow the operation, just as inflammations result from other wounds, and a few deaths are reported from these complications.

Wounding of the Peritoneum or Bladder.—Cutting into the peritoneum is not so fatal as was formerly supposed, but in amputations of the cervix it is an accident that should be carefully avoided. It is sometimes difficult to mark out the exact line of vaginal attachment, and there is then danger of cutting too high and opening Douglas's cul-de-sac, a misfortune which has happened to some of the most dexterous surgeons. Drs. Sims and Meadows each relate a case of this kind, and several others are reported. It does not require such care to avoid wounding the bladder, but where there is cystocele or we amputate for supra-vaginal enlargement, there is always danger of cutting into this viscus unless we trace its relations accurately by the use of the sound.

Mode of Performing the Operation.—Until quite recently the excision was performed with cutting instruments, the knife and scissors. Lisfranc and Huguier used the knife, but Huguier's operations were for supra-vaginal enlargement, and could not well have been performed with anything else. Simpson and others of his time preferred the scissors. Most operators now use the écraseur or galvano-caustic wire. The écraseur was first recommended in amputation of the cervix by the inventor, M. Chassaignac, but Mr. Spencer Wells was the first to operate with it. The galvano-caustic wire suggested by Mr. Marshall, of London, as a caustic and cutting instrument in surgery is now generally used in this country and in Europe. Of these instruments each has some special advantages. When the knife is used we can introduce silver sutures, and get union of the cut surfaces instead of having an open, granulating sore that takes from four to eight weeks to heal, but we run the risk of severe hemorrhage. With the scissors we can not divide the cervix so evenly or get union of the surfaces so readily, but hemorrhage is less profuse. With either the knife or scissors we can avoid injuring the surrounding structures.

There is seldom much hemorrhage with the chain or wire écraseur, or galvano-caustic wire, but with neither is it possible to get union of the cut surfaces. The chain écraseur is dangerous, from the fact that it can not be controlled, and even with great care may include within its grasp too much tissue

and cut into the peritoneum or bladder. The wire écraseur may inflict the same injuries in a less degree. The galvano-caustic wire will generally cut where you desire, but the hot wire may injure the vagina. When the cervix is excised with the knife or scissors, there is usually no contraction of the os; but when the écraseur or galvano-caustic wire is used, contraction is almost inevitable, and often causes trouble.



Cervix Scissors.

With the view of combining the advantages of these several instruments in one, I have had made what I style a cervix scissors, with which I have operated once.* I gave the idea to Mr. Adolph Fischer, a skillful instrument-maker of Louisville, and this instrument was fashioned by him. It will be observed that it is made after the fashion of an ordinary scissors, bent at right angles on the flat, with the blades slightly curved on the edge and finely and sharply serrated.

The operation is not painful, and it is not absolutely necessary to administer an anæsthetic, but most patients *demand* the anæsthetic. The patient should be placed on her left side, or in the lithotomy position, with assistants to hold the legs and separate the labia. With the vagina well dilated with a Sims speculum, or some modification of it, and the cervix held firmly with tenaculum forceps, cut off the necessary portion with any instrument you prefer, avoiding the roof of the vagina. It is better to remove too little than too much, since the excision of a small piece causes healthy involution, and generally reduces the uterus to its normal size. The old method of pulling the cervix through ostium vaginæ is unnecessary, and the operation can be performed as neatly within the vagina.

If there is hemorrhage, it can usually be controlled by applying sponges wrung out of cold water, or small pieces of ice.

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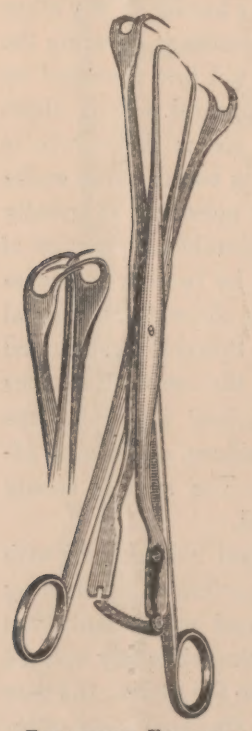
* This scissors, though specially contrived for amputating the cervix, may be found useful in other surgical operations.

If we wish to unite the mucous edges, it is best to use nothing else; but when the écraseur or galvano-cautery is used, or we do not wish to get union of the surfaces, the hemorrhage can be stopped by the hot iron, galvano-cautery button, or any other hemostatic. The improvement in the operation of covering the amputated stump with mucous membrane was first practiced by Dr. Sims, and has met with general approval among those who use cutting instruments. By this means the cervix is covered with healthy mucous membrane in two or three weeks after the operation, the danger of septic poisoning is greatly diminished, and there is seldom any considerable contraction of the os. The edges are brought together by two silver sutures on each side of the os, which only pass through the vaginal mucous membrane. Hegar, Simon, and Spiegelberg, covered the stump by uniting the vaginal with the cervical mucous membrane, and then united the gaping lateral edges after the fashion of Sims; but this is a tedious procedure, and has no advantage, except to control hemorrhage. The sutures should not be united until the bleeding has ceased.

It is difficult to amputate in supra-vaginal enlargement with anything but the knife. The operation is performed by dividing the mucous membrane close to the vaginal attachments, and dissecting out a cone-shaped piece by cutting obliquely upward and inward toward a sound introduced into the uterus, the base of the cone being at os externum, and the apex near os internum. By this means it is possible to remove most of the enlargement; and it is said of Huguier, that he sometimes removed part of the lower segment of the body of the uterus.

In this operation we should be careful to avoid wounding the adjacent structures, and the relations of the bladder should be defined by the sound. The sutures should be introduced in the same way as in the other amputations. After bending the ends of the wires so that they will not irritate the vagina, place a small pledget of cotton, wet in glycerine and bromo-chloralum, against the cervix and put the patient in bed. She should be kept in the horizontal position from eight to twelve days, the cotton dressing being removed morning and night. After the second day the vagina should be gently washed out with tepid

water every night. The food should be nourishing, and easy to be digested, and the bowels should be kept gently open. No other treatment is necessary unless some complication arises. The sutures should be removed from the seventh to the twelfth day; and if the os is closed the adherent edges should be separated by the introduction of a sound, which should be repeated every three or four days, until all tendency to contraction disappears.



Tenaculum Forceps.

In operating with my cervix scissors, it is necessary to have a strong double tenaculum forceps, so that the cervix can be held steady while it is removed by the rotary or sawing motion of the instrument. I have improved this tenaculum by combining with it another, to be introduced into the os and fastened into the tissue of the cervical canal. With such an instrument we can remove a cone-shaped piece by pulling down the intra-cervical tissue before introducing the outer teeth of the tenaculum, and then, after the external mucous membrane is divided, by pulling gently until the cervix is excised. There is no necessity of dividing the mucous membrane so high up, and therefore the danger of cutting into the peritoneum is less. With my scissors and this tenaculum the excision may be performed without risk of wounding any part of the vagina.

Case.—Hester Cady, aged twenty-nine, was admitted into the Louisville City Hospital February 29, 1878, for prolapsus uteri. Menstruation began at thirteen, and was regular and natural. She says she had prolapsus before menstruating, supposed to be caused by heavy lifting. She had a child at fifteen; labor natural and followed by no bad results. The uterus again prolapsed, and has been down ever since. Menstruation was natural after confinement until two years ago; since then she has had dysmenorrhœa, and the blood came away in clots; she

also had leucorrhœa. After the birth of her child she occasionally had sexual intercourse, but never became pregnant. Upon examination, the cervix was found protruding through ostium vaginæ, and was nearly two inches in diameter. Its infra-vaginal part was two and a half inches long, and was soft; and the os was so patulous that the finger could be introduced into it one inch and a half. The uterus was five inches deep. She had corporeal and cervical endometritis. She also had chronic indigestion, and her system was very much debilitated. At one time she suffered from constipation, and at another from diarrhœa. I gave her nourishing diet and tonic treatment, and applied carbolic acid up to the fundus of the uterus. As she improved in health the conversion of the connective-tissue elements into fibres considerably increased the hardness of the cervix, and I concluded to amputate it March 13th. Assisted by Dr. Leber and the resident medical staff of the Hospital, Drs. Owens, Cornick, and Wells, I removed about three-fourths of an inch of the cervix with my cervix scissors. My tenaculum was not then finished, and the one I used was too slender to hold the cervix steadily, but the amputation was performed more easily and quickly than on previous occasions with the ordinary scissors. The cut surface was smooth and even, with but little laceration or contusion. The hemorrhage during the cutting did not exceed a drachm, and there was none after it; but when I trimmed around the cervical canal with scissors, the blood flowed freely, and an artery began to spurt. The vaginal mucous membrane was united by two silver sutures on each side of the os, and the after-treatment was the same as described in the preceding pages. During the first two days she had considerable nausea, the effect of chloroform, but in other respects did well, and the operation caused at no time any pain or fever.

March 23rd I removed the sutures in the presence of the students and Drs. Owens and Wells. Union by adhesion was perfect, and there was only a small granulating surface around the os.

March 30th the patient was out of bed, and her general health good. The endometritis was nearly cured, and the cer-

vix, except immediately around the os, was covered with mucous membrane. There was no contraction of the os, nor was there any tendency to procidentia. The uterine cavity was carefully measured by Drs. Owens, Wells, Carnachan and myself; it was exactly two and a half inches deep.

NOTE.—Amputation of the cervix by the elastic ligature has been practiced in some cases. I am not prepared to recommend its use.